

(12) UK Patent Application (19) GB (11) 2 218 450 (13) A

(43) Date of A publication 15.11.1989

(21) Application No 8807686.4

(22) Date of filing 31.03.1988

(71) Applicant
Keith Shafto
94 Melody Road, Biggin Hill, Kent, United Kingdom

(72) Inventor
Keith Shafto

(74) Agent and/or Address for Service
Marks & Clerk
57-60 Lincoln's Inn Fields, London, WC2A 3LS,
United Kingdom

(51) INT CL⁴
E04G 21/20

(52) UK CL (Edition J)
E1S SAD

(56) Documents cited
GB 2208677 A US 3030738 A US 2648974 A
US 2585283 A

(58) Field of search
UK CL (Edition J) **E1S SAC SAD**
INT CL⁴ **E04G**

(54) Bricklayer's aid

(57) A bricklayer's aid comprises side pieces 1a, 1b each of inverted L-shape section and each having a downwardly extending protrusion 6a, 6b located partway along its length to engage the vertical joints between adjacent bricks. In use a first course of bricks is laid along a mortar bed, being spaced apart by a distance equivalent to the width of protrusions 6a, 6b. A spacing tool 18 can be separately provided for this if desired. The aid is placed with the edges 1a, 1b extending along the span 1 1/2 - 2 bricks, and with protrusions 6a, 6b entering into the vertical joints between the bricks. Mortar is then supplied to fill the vertical joint and between the edges 1a, 1b. The mortar is smoothed off and the tool moved along, replaced, and the operation repeated. Side pieces 1a, 1b are interconnected by a pivotal yoke 8 which may be adjustable to build walls of different thickness.

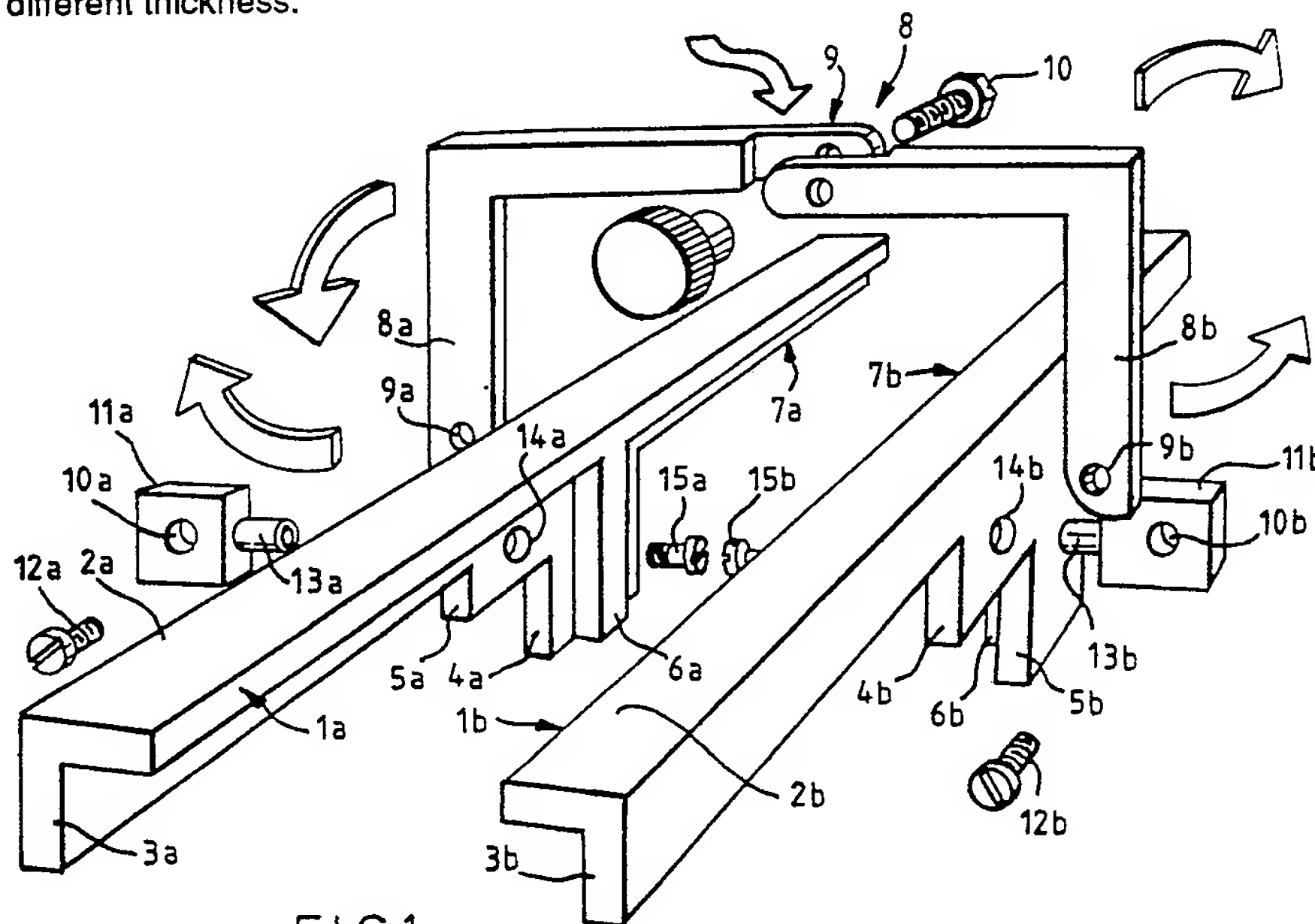


FIG.1.

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1982.

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M&C FOLIO: 230P55626

WANGDOC: 0639r

BRICKLAYING AID

THIS INVENTION relates to bricklaying, and more particularly to a device for use by an inexperienced or "do-it-yourself" bricklayer to achieve structures of uniform joint size and clean professional appearance.

Bricklaying presents considerable difficulty for the average "do-it-yourself" enthusiast. The technique of bricklaying involves forming a bed of mortar; laying upon the bed of mortar a succession or course of bricks, each brick as laid having one end face covered with an individual layer of mortar; repeating the process on the top of the course of bricks so laid; and so on.

Typically, an inexperienced worker will have the mortar too wet or too dry, or will find himself unable to produce a bed of mortar of uniform thickness, or will work with mortar which slips off the end face of the bricks, or will otherwise run into difficulties. The consequence is a wall of irregular appearance (often with discolourations caused by mortar which has run out of the joints or bedding surfaces) which is prone to collapse.

The desired outcome is of course is to have a succession of uniform courses, with a clean face, and with each horizontal or vertical joint between adjacent bricks clearly defined by recessed mortar.

The present invention sets out to provide a device for achieving this professional appearance.

The invention consists in a builders tool in the form of a framework comprising two elongate parallel horizontal bars of length generally equivalent to at least one house brick, and two vertical bars extending one from each horizontal bar to an extent generally equivalent to the thickness of a course of house bricks: whereby the framework can be arranged over a line of house bricks spaced apart by empty spaces of the same thickness as the vertical bars so that the vertical bar close the edges of the empty spaces and the horizontal bars lie along the edges of the bricks to define a horizontally-extending mortar-receiving area, communicating with the spaces, whereby upon successive placements of the tool, and deposition and smoothing of mortar into the mortar-receiving area and vertical space, a bed of mortar, recessed from the horizontal and vertical edges of the bricks, is built upon for the laying of a further line of bricks spaced apart.

The invention consists in another aspect in a builders tool comprising two elongate members of opposite hand,

each being shaped along its length to exhibit a flat top, a side edge of uniform depth, and a flat undersurface spaced at a uniform distance beneath the flat top,

each possessing, at the same effective point along its length a protrusion, with front and back faces uniformly spaced apart extending downwardly from the flat undersurface at a right angle and for a distance not exceeding the depth of a course of bricks,

the distances between the respective flat tops and flat undersurfaces of the two members being equal, the distances between the respective front and back faces of the two protrusions being equal and the lengths of the two protrusions measured in the vertical direction being equal,

the configuration being such that the two elongate members can be jointly positioned upon a course of bricks separated by identical empty spaces of size equal to the distance between the respective front and back faces of the two protrusions with the flat undersurfaces along the edge regions of the bricks, the side edges

opposed and parallel, and the protrusions within and filling the vertical edge regions of said empty spaces;

whereby there is jointly defined a vertical mortar-receiving space between adjacent bricks and a horizontal mortar-receiving area over the bricks between the opposed side edges, and whereby a smoothing tool passed over said mortar within the horizontal area while resting on said flat tops defines a datum surface for receiving a further course of spaced bricks after removing the tool.

There is usually, though not invariably a flat guide face extending at right angles to the flat under surface.

The invention will be further described with reference to the accompanying drawings in which:-

Figure 1 is an exploded perspective view of the basic device;

Figure 2 shows in similar perspective view an extension piece for fitting to Figure 1; and

Figure 3 shows in similar perspective view a spacing and tamping piece for use with the device of Figure 1.

The device basically comprises two side members 1a and 1b, each being a mirror image of the other. Side member 1a can be considered as having a top piece 2a, a side piece 3a at right angles thereto, and a downwardly extending portion 4a about two thirds of the way along. Portion 4a, in turn comprises a flat generally L-shaped region 5a continuing the outer and inner planes of the side piece 3a, and an inwardly facing shoulder 6a terminating in a face coplanar with the edge face of top portion 2a. This coplanar face is referenced as 7a and, as will be explained more fully below, defines the visible face of the mortar between the bricks.. The members described above are the essential operative members of the device, and are matched by equivalent features 2b to 7b on the side piece 1b.

For convenience side pieces 1a, 1b are held together by a yoke portion 8, itself consisting of two L-shaped members 8a and 8b mutually attached at the central region 9 by a suitable threaded nut 10. At their other ends the downwardly extending arm of each yoke portions, 8a or 8b respectively is in each case provided with a through-bore 9a (9b) which in use is assembled to a through bore 10a (10b) in a block 11a (11b) by a screw 12a (12b). Each block is itself pivotably attached to region 5a (5b) by a projecting dowel 13a (13b) held in a suitable bore 14a (14b) by screw 15a (15b).

As thereby constituted the device is suitable for use in building a single leaf of brickwork, e.g. as part of a cavity wall or as part of an ornamental wall for example on a patio or porch.

Figure 2 shows an extension piece 16. At indicated, the purpose of this extension is to fit between the ends of the yoke pieces 8a and 8b, one fitment being fixed and the other one being capable of pivoting if desired. Use of the extension piece enables the device to be used for walls of two bricks in thickness, whatever form of brickwork bonding, (e.g. simple half bond, Flemish, Old English, Garden Wall, or the like) is used.

Figure 3 shows a spacing and tamping piece for use with the device shown in Figure 1. It essentially comprises a top piece 18 and a downwardly extending rather thinner portion 19. The top piece 18 also has a thinner edge region 18a.

It will be apparent from a consideration of the drawings and the above description that the device shown in Figure 1, when assembled, has two modes of pivoting. In one mode the device can open about bolt 10, so that the two side pieces can be relatively moved laterally. In the other mode of movement, the yoke 8 can be tilted to one side or the other, pivoting by dowels 13a, 13b

riding in their relative bores 14a, 14b, for reasons described in more detail below.

The device operates as follows:-

(1) It is first necessary to lay upon a suitably prepared foundation a line of bricks, spaced apart by a distance equivalent to that of portion 18 of the spacing piece of Figure 2. The spaces between the bricks are not, at this time filled. This step does not normally present too great a difficulty even to an inexperienced "do-it-yorself" enthusiast. The thickness of portion 18 is a distance X, which also appears where shown as a necessary or preferred distance elsewhere in the drawing.

(2) Subsequently, the assembled device of Figure 1 is layed on top of the course of bricks, so as to span typically one and a half bricks in length and leave a space between the upper surfaces 2a and 2b. The device is held in an inward, parallel, relationship, by the yoke 8, and is located against sliding by the fitment of the protrusion 6a and 6b in the unoccupied vertical space between bricks in the underlying course.

(3) When the spaces between the two bricks (between protrusions 6a, 6b) and the space above the bricks between surfaces 2a and 2b are generally filled, the

device is carefully folded outwards about bolt 10 and moved along for a length equal to one brick so that the protrusion 6a and 6b then fit in the vertical space between the next two bricks.

(4) The new region of mortar is then placed between the two opposed top surfaces 2a and 2b, and down the vertical gap between 6a and 6b.

(5) The process can be repeated as long as the underlying bed continues. It will be apparent that the surfaces 2a and 2b provide convenient datum surfaces for finishing off the height of the bed of mortar contained between them. To facilitate the use of a trowel for this purpose, the yoke can be swung to one side or to the other so that a uniform flat bed of mortar of defined thickness, recessed inwardly from the edge of the bricks by the width of the surface 2a, 2b is provided. When the body of mortar has reached its desired length, the device is removed.

Instead of the irregular appearance of a bed of mortar as laid by a professional bricklayer, the bed of mortar is of a smooth flat appearance and recessed inward from the edge of the brick.

(6) A further course of bricks moistened and carefully

laid upon the moistened surface, spaced apart as before, upon this extending flat regular bed of mortar, and the same procedure is followed as before. Once again, mortar is filled between the bricks by means of a the tamping portion 19 of the spacer block 18 and a flat recessed layer of mortar is left for the next course of bricks and so on.

The eventual final appearance of the brickwork laid in this fashion is regular and level, with deeply recessed horizontal and vertical joints between the bricks, and with no discoloration or staining of mortar on either face of the bricks.

If it is desired to operate with two thicknesses of bricks, the extension piece as shown in Figure 2 can be incorporated. A bed of mortar is laid in the same way, although of course this will be considerably wider. Bricks are laid upon the bed of mortar as before, some longitudinally and some transversely as required by the particular bond being formed, and spaced apart by the region 18 of the spacer as before. Each course of mortar is built up with tamping down of the mortar supply between the underlying bricks.

Although the final structure will be generally free from excess of mortar, the thinned shoulder 18a is

provided upon the tamping piece as a suitable protrusion which can be run along and down the joints just to remove any incidental small amounts of mortar which may arise.

Various modifications may be made within the scope of the invention. For example, as shown, side pieces 3a and 3b are the same thicknesses as to the top pieces 2a and 2b, but this is not strictly necessary. It is however usual for the side pieces 2a and 2b to have the same thickness as the protrusion 6a and 6b and to have this thickness in turn the same as thickness of the spacing member 18.

The protrusion 6a and 6b are shown in the drawing as being of the same flat shape as the edge of the upper face of the side members 2a and 2b. If desired, however, they could be bevelled or rounded or slanted so as to give a different effect to the vertical joints of the invention, from those of the horizontal joints.

CLAIMS:

1. A builders tool in the form of a framework comprising two elongate parallel horizontal bars of length generally equivalent to at least one house brick, and two vertical bars extending one from each horizontal bar to an extent generally equivalent to the thickness of a course of house bricks: whereby the framework can be arranged over a line of house bricks spaced apart by empty spaces of the same thickness as the vertical bars so that the vertical bar close the edges of the empty spaces and the horizontal bars lie along the edges of the bricks to define a horizontally-extending mortar-receiving area, communicating with the spaces, whereby upon successive placements of the tool, and deposition and smoothing of mortar into the mortar-receiving area and vertical space, a bed of mortar, recessed from the horizontal and vertical edges of the bricks, is built upon for the laying of a further line of bricks spaced apart.

2. A builders tool comprising two elongate members of opposite hand,

each being shaped along its length to exhibit a flat top, a side edge of uniform depth, and a flat undersurface spaced at a uniform distance beneath the

flat top,

each possessing, at the same effective point along its length a protrusion, with front and back faces uniformly spaced apart extending downwardly from the flat undersurface at a right angle and for a distance not exceeding the depth of a course of bricks,

the distances between the respective flat tops and flat undersurfaces of the two members being equal, the distances between the respective front and back faces of the two protrusions being equal and the lengths of the two protrusions measured in the vertical direction being equal,

the configuration being such that the two elongate members can be jointly positioned upon a course of bricks separated by identical empty spaces of size equal to the distance between the respective front and back faces of the two protrusions with the flat undersurfaces along the edge regions of the bricks, the side edges opposed and parallel, and the protrusions within and filling the vertical edge regions of said empty spaces;

whereby there is jointly defined a vertical mortar-receiving space between adjacent bricks and a horizontal mortar-receiving area over the bricks between

the opposed side edges, and whereby a smoothing tool passed over said mortar within the horizontal area while resting on said flat tops defines a datum surface for receiving a further course of spaced bricks after removing the tool.

3. A builders tool as claimed in claim 2 possessing a flat guide face extending at right angles to the flat under surface.

4. A builders tool as claimed in claim 1 and substantially as herein described with reference to the accompanying drawings.

5. A builders tool as claimed in any one preceding claim in continuation with a selectively assemblable lateral extension piece for spacing apart the elongate members to accommodate the structure of a wall of double-brick thickness.

6. A builders tool as claimed in any one preceding claim further comprising a spacing and tamping member to facilitate positioning the bricks and filling the vertical spaces with mortar.